Kuta Software - Infinite Geometry

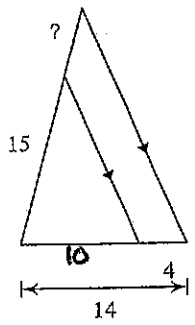
Name Key

Proportional Parts in Triangles and Parallel Lines

Date _____ Period ____

Find the missing length indicated.

1)

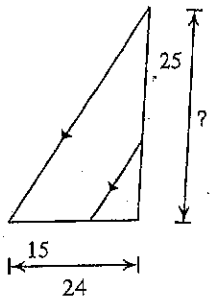


$\frac{10}{4} = \frac{15}{x}$

$10x = 60$

$x = 6$

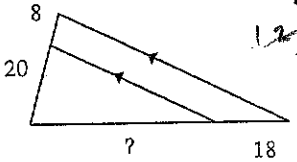
2)



$\frac{24}{15} = \frac{x}{25}$

$x = 40$

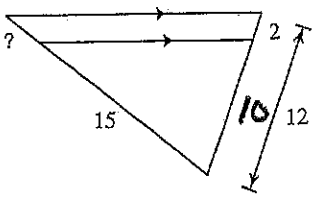
3)



$\frac{20}{8} = \frac{x}{18}$

$x = 45$

4)



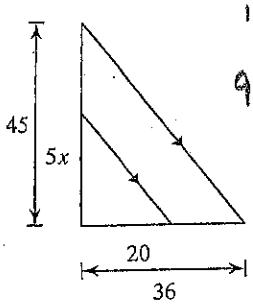
$\frac{10}{2} = \frac{15}{x}$

$15 = 5x$

$3 = x$

Solve for x.

5)

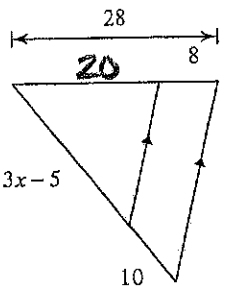


$\frac{5x}{45} = \frac{20}{36}$

$9x = 45$

$x = 5$

6)



$\frac{3x-5}{10} = \frac{20}{8}$

$2(3x-5) = 50$

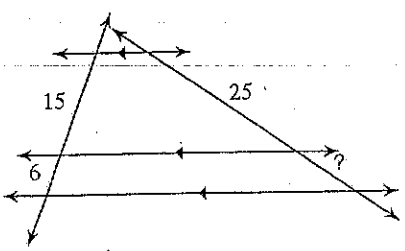
$3x - 5 = 25$

$3x = 30$

$x = 10$

Find the missing length indicated.

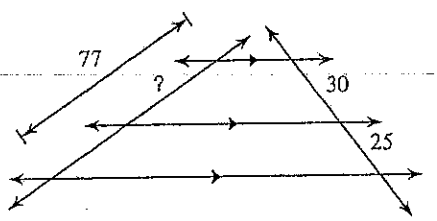
7)



$\frac{15}{6} = \frac{25}{x}$

$x = 10$

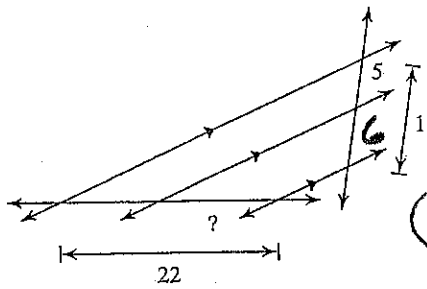
8)



$\frac{77}{x} = \frac{55}{36}$

$x = 42$

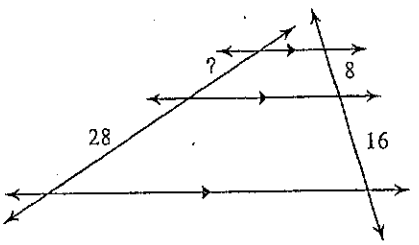
9)



$\frac{6}{11} = \frac{x}{22}$

$12 = x$

10)



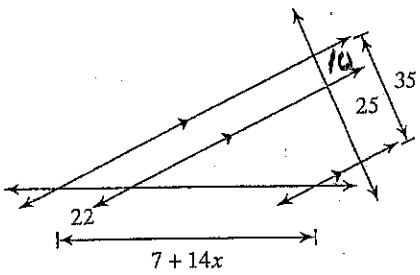
$\frac{x}{28} = \frac{8}{16}$

$2x = 28$

$x = 14$

Solve for x.

11)



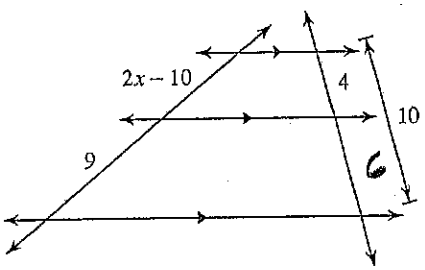
$\frac{10}{35} = \frac{22}{7+14x}$

$77 = 7 + 14x$

$70 = 14x$

$5 = x$

12)



$\frac{2x-10}{9} = \frac{4}{6}$

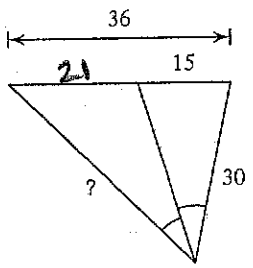
$2x - 10 = 6$

$2x = 16$

$x = 8$

Find the missing length indicated.

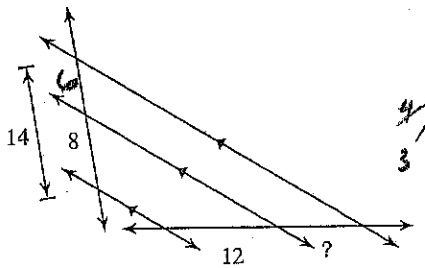
13)



$\frac{x}{21} = \frac{36}{15}$

$x = 42$

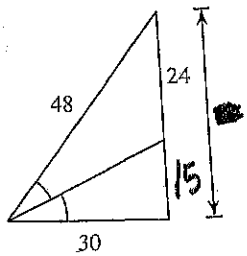
14)



$\frac{8}{6} = \frac{12}{x}$

$x = 9$

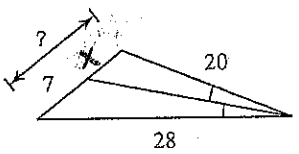
15)



$\frac{24}{x} = \frac{48}{30}$

$x = 15$

16)



$\frac{x}{20} = \frac{7}{28}$

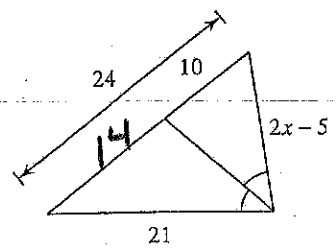
$4x = 20$

$x = 5$

$5 + 7 = 12$

Solve for x.

17)



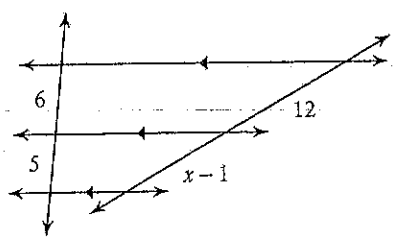
$\frac{21}{14} = \frac{2x-5}{10}$

$4x - 10 = 30$

$4x = 40$

$x = 10$

18)



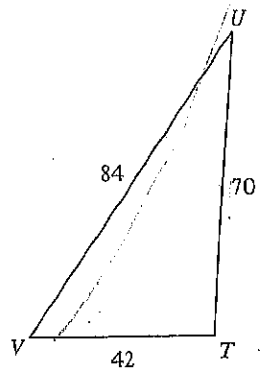
$\frac{5}{6} = \frac{x-1}{12}$

$10 = x - 1$

$11 = x$

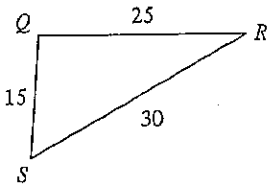
State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

7)



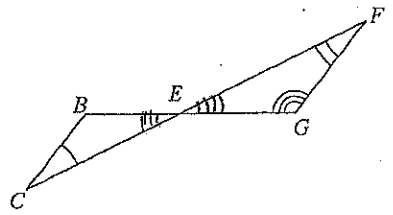
$\frac{42}{15} = \frac{70}{25} = \frac{84}{30}$

2.8 2.8 2.8 ✓



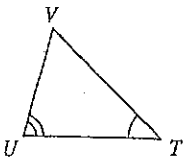
$\Delta TUV \sim$ ΔQRS SSS~

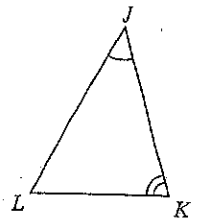
8)



$\Delta EFG \sim$ Not ~

4)

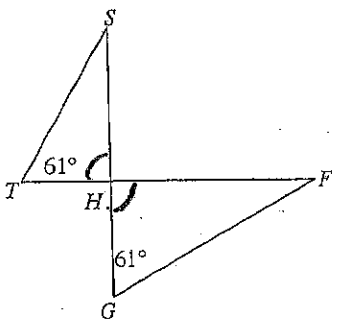




$\Delta JKL \sim$ ΔTUV

AA~

9)

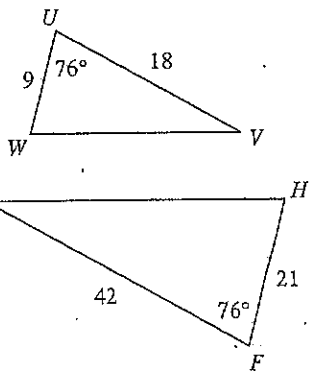


$\Delta HGF \sim$ ΔHTS AA~

10)

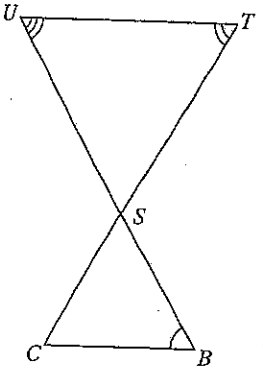
$\frac{9}{21} = \frac{18}{42}$ ✓

.4286 .4286



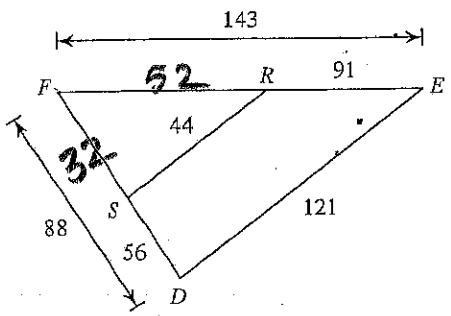
$\Delta FGH \sim$ ΔUVW SAS~

5)



$\Delta STU \sim$ Not ~

11)

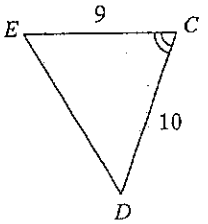


$\Delta FED \sim$ ΔFRS SSS~ or SAS~

$\frac{32}{88} \quad \frac{44}{121} \quad \frac{52}{143}$

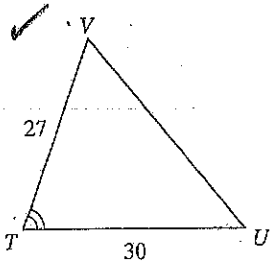
.36 .36 .36

12)



$\frac{9}{27} = \frac{10}{30}$

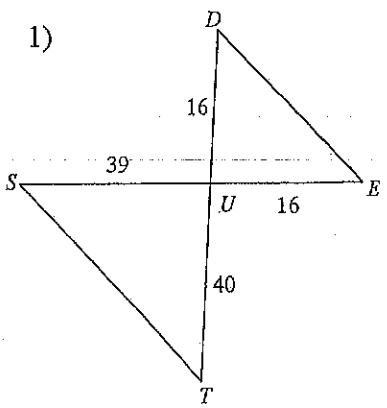
$\frac{1}{3} \quad \frac{1}{3}$ ✓



$\Delta TUV \sim$ ΔCDE

SAS~

1)



$\Delta UTS \sim$ Not ~